

What is claimed is:

1. An optical information recording medium comprising:  
information recording tracks configured to serve as grooves; and  
phase pits formed on the tracks in a way such that radially opposite edge portions  
5 of the phase pits orthogonal to the tracks have tilt angles different from each other, ✓  
wherein preformatted information is recorded as said phase pits.
2. An optical information recording medium comprising:  
grooves configured to serve as information recording tracks; and  
10 phase pits formed on the tracks in a way such that radially opposite edge portions  
of the phase pits orthogonal to the tracks have tilt angles different from each other,  
wherein preformatted information is recorded as said phase pits, and  
wherein a track center of the grooves and a center of the phase pits are  
substantially identical, gap widths of the grooves and the phase pits are substantially  
15 identical, and gap depths of the grooves and the phase pits are substantially identical.
3. An optical information recording medium comprising:  
grooves configured to serve as information recording tracks; and  
phase pits formed on the tracks in a way such that radially opposite edge portions  
20 of the phase pits orthogonal to the tracks have tilt angles different from each other,  
wherein preformatted information is recorded as said phase pits, and  
wherein a center of the phase pits is radially displaced relative to a track center of  
the grooves, a gap width of the phase pits is greater than a gap width of the grooves such  
that each of the phase pits leaves a radial clearance from an immediately adjacent one of  
25 the grooves, and gap depths of the grooves and the phase pits are substantially identical.
4. An optical information recording medium comprising:  
grooves configured to serve as information recording tracks; and  
phase pits formed on the tracks in a way such that radially opposite edge portions  
30 of the phase pits orthogonal to the tracks have tilt angles different from each other,